Examiner: Mullis, Jeffrey C.; Art Unit 1711

Amendment No. 2 -- Reply to Office Action of February 25, 2004

REMARKS/ARGUMENTS

Support for the recitation of "less than about 5% shrinkage" in the wording added to claim 1 is found in the application as filed at page 11, lines 17-19. New claim 10 finds support in claim 1 as filed, the recitation of the initiator having been deleted from claim 1 and placed in this new claim. New claim 11 finds support in claim 2 as filed, the recitation of the initiator having been deleted from claim 2 and placed in this new claim. New claims 12 and 13 find support in claim 8 as filed. New claims 14 and 15 find support in claim 9 as filed. Accordingly, no new matter is presented.

Claim Rejections -- 35 U.S.C. § 112, Second Paragraph

The two terms that have been objected to are both removed from the claims, the first by replacement with a phrase from the specification, and the second by cancellation of the claim in which the term appears.

Claim Rejections -- 35 U.S.C. § 102(b) or 103(a)

The rejection of claims 1-9 over Muskat is respectfully traversed. A feature of the invention recited in both claims 1 and 2, and therefore all claims of the application, is that the dead polymer and the reactive plasticizer exhibit compatibility at temperatures not higher than 100°C. For an understanding of this feature, the examiner is directed to page 17, lines 6-7 of the specification, which states that:

"Compatibility' refers to the thermodynamic state where the dead polymer is solvated by the reactive plasticizers."

Compatibility at temperatures of 100°C or below claim is not disclosed by Muskat, and the polymer and plasticizer used by Muskat are explicitly described as failing to meet this requirement. In column 3, last paragraph, Muskat explains:

"The polyvinyl chloride particles are combined with a reactive liquid plasticizer which, in the invention, is selected to be a low molecular weight ester reaction product of alpha, beta-unsaturated monocarboxylic acid such as [list of polymers omitted]... which, while incapable of dissolving the polyvinyl chloride at temperatures of about room temperature is, nonetheless, capable of solvating the polyvinyl chloride

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polymer at elevated temperatures. Still further, the reactivity of the plurality of unsaturated groups which are alpha, beta to the ester groups is such that polymerization of the polyester can be achieved within the ambit of the same operating conditions within which the full solvation of the polyvinyl chloride is effected, e.g., the application of temperatures in the range of from 120-200°C for a period of time of from 1-30 minutes." (Emphasis added)

Thus, Applicants' polymers are fully solvated with the reactive plasticizer below 100°C while those of Muskat are fully solvated only at temperatures above 120°C. There is no disclosure or suggestion in Muskat that combinations of a polymer and a reactive plasticizer in which the former is fully solvated by the latter at temperatures that are 20 degrees or more below the minimum solvation temperature of Muskat would serve any purpose. Accordingly, Applicants' invention as recited in the instant claims is neither anticipated nor rendered obvious by the disclosure of Muskat.

Claim Rejections -- Obviousness-Type Double Patenting

The rejection of claim 1 for obviousness-type double patenting over patents nos. 6,570,714 and 6,416,690, is obviated by the enclosed Terminal Disclaimer.

CONCLUSION

In view of the foregoing, reconsideration of the application is respectfully requested. Should any matters remain that can be resolved by a telephone conference, the Examiner is encouraged to telephone the undersigned at 415-576-0200.

Respectfully submitted,

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